

THE NATIONAL HOSPITALS
FOR NERVOUS DISEASES

THE NATIONAL HOSPITAL
QUEEN SQUARE, LONDON WC1N 3BG
MAIDA VALE HOSPITAL, W9 1TL

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LONDON W9 1TL
01-286 5172

23 July 82

Dear Dr Redhead,

What marvellous news — many
many congratulations
I will certainly write Dr Scriver,
but I would very much like to see
you before I go. Could I suggest
Friday Sept 17. some time convenient
to you in the morning?

With kind regards

R Platt

10.30
am.

answered
6/8/82

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12 Dec. 81

Dear Dr. Redhead,

Once again many thanks for
giving me such a clear explanation of
my problems.

I am delighted that you are writing
a book on the subject matter of your
lectures. But I think of the way
you have dealt with my enquiries
ranging from simple things like the
quadratic formula - b \pm b $\sqrt{b^2 - 4ac}$ to
more difficult ones (what is zero)
to the relationship between plane &
spherical trigonometry (I am dipping
into Neugebauer's 3 vol. History now),
the torquetum & the hyperboloid -
and I am sorry the book will not have
a wider audience. I retire next year

and will continue to explore
sundials & their mathematics, and if
I get into difficulties again, may
trouble you.

I hope Mr Redhead and
the boys are well.

Yours sincerely

R. P. Hall.

W. Fleet 3-1-82

Can I still expect you?
What debt for letters for
drop?

Thanks for all your help
& support etc. -

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16 Oct 81

Dear Dr Redhead,
Thank you for your letter.

I am delighted to hear about the
OVP book. I found them excellent
when I did my book, not least
because they were not badgering
me all the time, but left me in
peace. I hope the other aspects
of the work are going well too.

I am enclosing this
hyperboloid of one revolution —
my question today is — do its
properties enable it to ~~be~~
function as a sundial — if so
what is the angle of the cone,
and in what direction should it

be pointed?

I hope Mrs Redhead & the children are well.

Yours sincerely

R Platt.

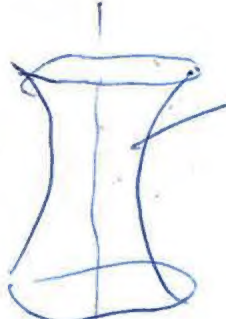
2 cookers

a)



Staggered bed in circle.

b)



Staggered bed in circle.

See glass at it. out to 200

out of row later

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22 Jan 82

Dear Mr Peckhead

Many thanks for your letter. There should be no difficulty whatsoever in getting the tablets from your family doctor. I retire in October. My

home address is 1 CHURTON PLACE
SW1

and phone 834/5044. (I think I am more likely to need your advice than you mine).

Best wishes

R Pratt.

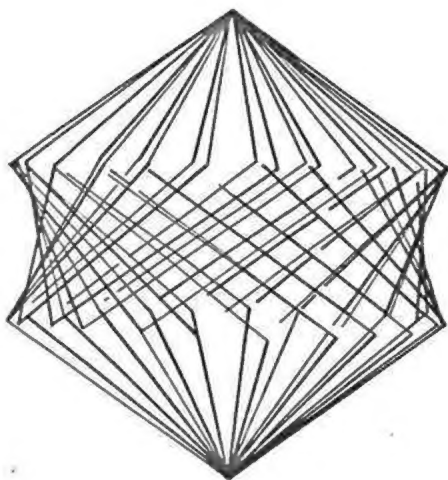
the axis, it generates a cylinder; if its extension intersects the axis, it generates part of a cone.) This suggests a simple experiment with a pencil and a paper clip. Open the paper clip to form an acute angle and then push one end through the eraser of the pencil, as is shown in the bottom illustration on page 37. Turn the wire so that *AB*, the upright part, is skew to the vertical axis of the pencil. Place the pencil between your palms and spin it by sliding your hands rapidly back and forth. With the right lighting the rotating skew line will form a transparent hyperboloid.

If a cube is spun on one corner, its six skew lines generate a similar surface. With a little practice you can snap a die between your finger and your thumb between two skew axes. The cogs of each gear are one of its sets of generating straight lines.

A striking architectural use of a hyperboloid of revolution of one sheet is

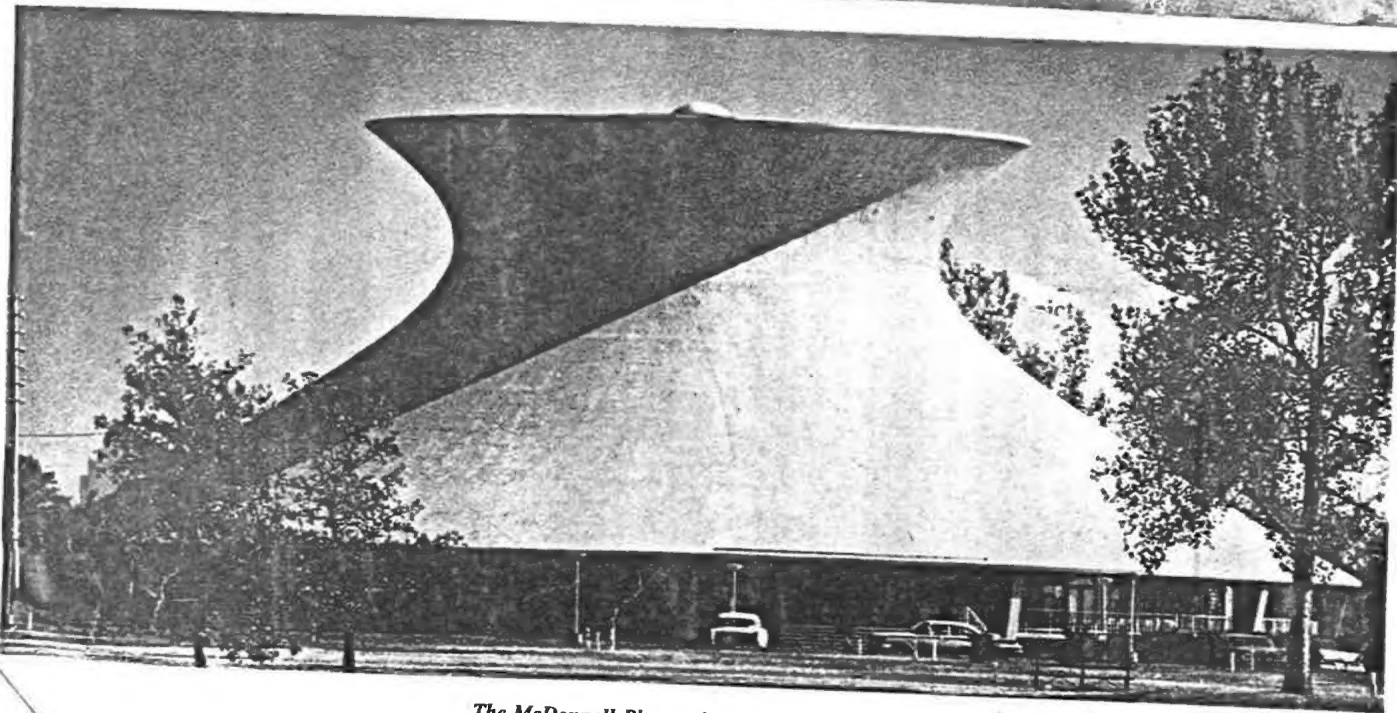
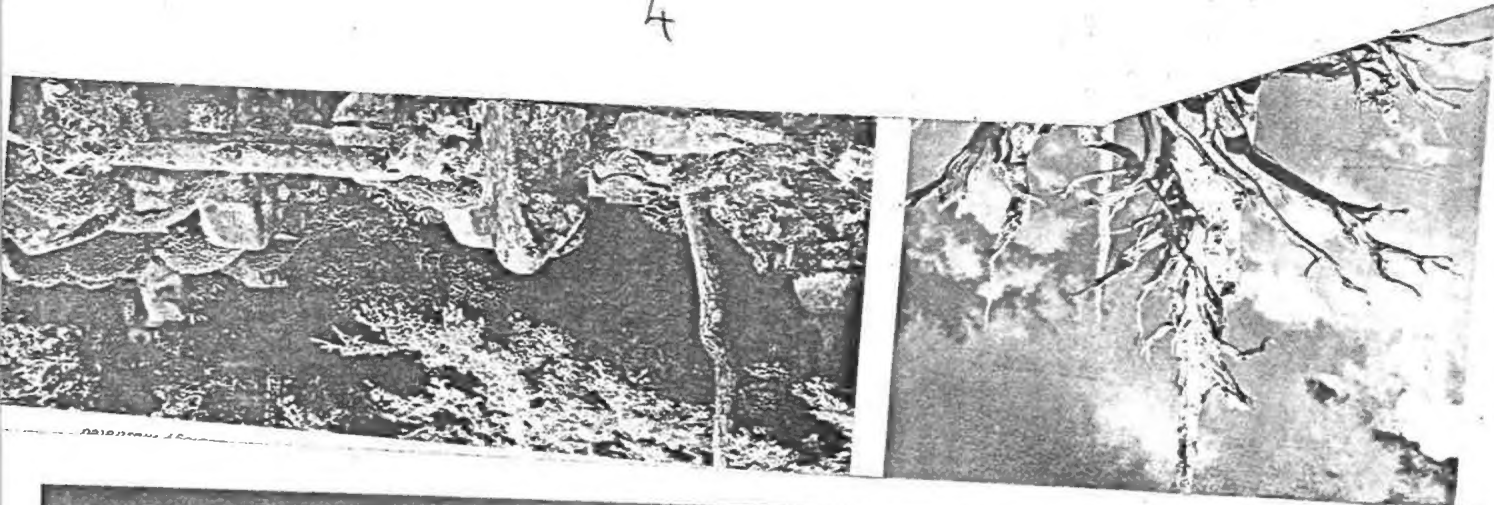
provided by the McDonnell Planetarium at Forest Park in St. Louis [see illustration on page 42]. The designer, Gyo Obata, chose the surface because the hyperbolic paths of certain comets suggest, as he put it, "the drama and excitement of space exploration." Note the straight line of the shadow thrown by the circular roof as sunshine slants down on the planetarium. Is this shadow line one of the generating straight lines of the surface, or is it a space curve that appears straight only when it is viewed from the angle shown? I shall give the answer next month.

The ciphertext given last month—the one Edgar Allan Poe could not solve—has the following plaintext: "Mr. Alexander,



Hyperboloid between cones from spinning cube

Hyperboloidal gears transmit motion to a skew shaft



The McDonnell Planetarium in St. Louis, Mo.

h Feb

Dear Dr Redhead

I am most grateful to you for
spending time on the Torquetum,
& for your exposition of its
workings, clear as always.

He I have vol 2. of
further, but he is not helpful as
he contents himself with supplying
the text of an early manuscript
on the instrument, & does not translate
it into English. I did not know
of Muller's papers in Giel & Tent, &
I am pretty well of them — he is a
very clear writer.

I am glad all is

going well,

Many thanks again

R Hall.